

Atty Dkt. No.: CLON-037CON
USSN: 09/839,696

In the claims:

Claims 1-13 (Canceled).

14. (Previously Presented) A method for synthesizing carboxymethylated aspartate agarose chelating resin, said method comprising:
- (a) forming oxirane-agarose;
 - (b) conjugating aspartic acid to said oxirane-agarose to produce aspartate agarose;
 - (c) carboxymethylating said aspartate agarose to produce carboxymethylated aspartate agarose; and
 - (d) complexing said carboxymethylated aspartate agarose with a metal ion other than Ca^{2+} to produce a complex that offers two available valencies, wherein said metal ion is a transition metal ion.
15. (Original) The method, according to claim 14, wherein said conditions for oxirane-agarose formation comprise carrying out the formation at about room temperature, overnight, adjusting to about pH 7.0.
16. (Previously Presented) The method, according to claim 14, wherein said conjugating aspartic acid to said oxirane-agarose comprises reacting said oxirane-agarose and said aspartic acid at about 80°C for 4 hours.
17. (Previously Presented) The method, according to claim 14, wherein said method further comprises washing said aspartate-agarose to remove extraneously bound metals.

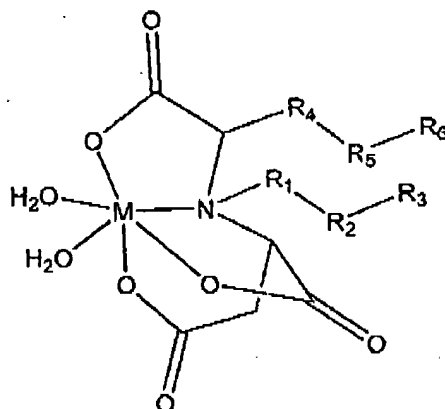
Claims 18-37 (Cancelled).

38. (Cancelled)

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39. (Previously Presented) The method according to claim 14, wherein said transition metal ion is a third-block transition metal ion.
40. (Previously Presented) The method according to claim 39, wherein said transition metal ion is selected from the group consisting of Fe^{2+} , Co^{2+} , Ni^{2+} , Cu^{2+} and Zn^{2+} .
41. (Previously Presented) The method according to claim 40, wherein said transition metal ion is Co^{2+} .
42. (Currently Amended) The method according to claim 14 ~~38~~, wherein said transition metal is complexed to said carboxymethylated aspartate agarose in an octahedral geometry.
43. (Cancelled)
44. (Previously Presented) A method for synthesizing carboxymethylated aspartate agarose chelating resin, said method comprising:
- (a) forming oxirane-agarose;
 - (b) conjugating aspartic acid to said oxirane-agarose to produce aspartate agarose;
 - (c) carboxymethylating said aspartate agarose to produce carboxymethylated aspartate agarose; and
 - (d) complexing said carboxymethylated aspartate agarose with a metal ion other than Ca^{2+} to produce a carboxymethylated aspartate agarose chelating resin described by the formula:

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wherein $R_4-R_5-R_6 = H$;

M = transition metal ion in a 2+ oxidation state with a coordination number of 6;

R_1 = a linking arm connecting the nitrogen atom of CM-Asp with R_2 ;

R_2 = a functional linking group through which CM-Asp linking arm R_1 is connected to R_3 ;
 and

R_3 = an agarose matrix.

Cancel Claims 45 to 57.

Cancel Claims 58 to 72.